REMEDIAL DESIGN

STATEMENT OF WORK

ONONDAGA LAKE SUPERFUND SITE

OPERABLE UNIT 25 – LOWER LEY CREEK

City of Syracuse, Town of Salina, Onondaga County, State of New York

EPA Region 2

July 2016

435804

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1. INTRODUCTION

1.1 **Purpose of the Statement of Work**. This Statement of Work ("SOW") sets forth the procedures and requirements for implementing the Work as specified by the Record of Decision ("ROD").

1.2 **Structure of the Statement of Work**. Section 2 (Community Involvement) sets forth the Environmental Protection Agency's ("EPA's") and Respondents' responsibilities for community involvement. Section 3 (Remedial Design) sets forth the process for developing the remedial design ("RD"), which includes the submission of specified primary deliverables. Section 4 (Reporting) sets forth Respondents' reporting obligations. Section 5 (Deliverables) describes the content of the supporting deliverables and the general requirements regarding Respondents' submission of, and the EPA's review of, approval of, comment on, and/or modification of, the deliverables. Section 6 (Schedules) sets forth the schedule for submitting the primary deliverables and identifies the supporting deliverables that must accompany each primary deliverable. Section 7 (State and Onondaga Nation Participation) addresses State and Onondaga Nation participation. Section 8 (References) provides a list of references, including URLs.

Because the Lower Ley Creek remedial action will not be implemented until after Upper Ley Creek (i.e., Operable Unit 2 of the General Motors – Inland Fisher Guide Operable Unit of the Onondaga Lake Superfund Site) remediation is completed, and because the schedule for pre-design sampling in Lower Ley Creek is anticipated to precede completion of remediation in Upper Ley Creek, the structure of the SOW includes provisions to allow the PRP Group to determine whether any additional surface sediment sampling or survey is warranted following completion of remediation activities in Upper Ley Creek prior to completing the final stages of the design and associated documentation. Section 3.3 describes remedial work plan requirements that will define information to be reviewed to make this determination. Section 6.2 describes the schedule for the PRP Group determination of whether additional sampling is warranted, and submittal of a sampling plan and revised design schedule to accommodate the additional sampling.

1.3 The Scope of the Remedy includes the actions described in the "Selected Remedy" section of the Record of Decision ("ROD"), including:

(a) Excavation of PCB-contaminated soils adjacent to the Creek exceeding 1 milligram per kilogram ("mg/kg") of PCBs in the upper two feet of soils and exceeding 10 mg/kg of PCBs in soils deeper than two feet;

(b) Excavation of PCB-contaminated sediment within the Creek exceeding 1 mg/kg of PCBs;

(c) Excavation of sediment to a depth of 1 foot within an approximate 1,200-foot reach of the Creek, immediately upstream of Interstate 81.

(d) Excavation of PCB-contaminated sediment/soil from the adjacent wetlands exceeding 1 mg/kg of PCBs;

(e) Transport of the excavated soils and sediments containing greater than 50 mg/kg of PCBs to a Toxic Substances Control Act ("TSCA")-compliant facility;

(f) Transport of those soils and sediments which are determined to be Resource Conservation and Recovery Act ("RCRA") characteristic hazardous waste (*i.e.*, fail Toxic Characteristic Leaching Procedure testing) and are non-TSCA waste (*i.e.*, less than 50 mg/kg PCBs) to an off-site RCRA-compliant facility;

(g) Transport of those soils and sediments that are not TSCA-regulated (less than 50 mg/kg of PCBs) and are not characteristically hazardous waste to an appropriate disposal facility. If a local disposal facility is not feasible, these soils and sediments will be transported to a non-local facility for disposal;

(h) Performance of wetland and habitat delineation to establish a baseline prior to the development of a restoration plan for affected areas;

(i) The unsubmerged excavated wetland areas will be restored with clean substrate and vegetation consistent with an approved habitat restoration plan developed as part of the design. Habitat construction in excavated wetland areas will be performed to restore areas to match pre-excavation conditions, to the extent practicable, based on a habitat survey to be performed as part of the PDI, but otherwise not interfere with the works of the regulating drainage district;

(j) Excavated soil areas will be restored with at least 2 feet of clean substrate and vegetation consistent with an approved habitat restoration plan developed as part of the design. Habitat construction in soil excavation areas will be performed to restore areas to match pre-excavation conditions, to the extent practicable, based on a habitat survey to be performed as part of the PDI, but otherwise not interfere with the works of the regulating drainage district. In excavated soil areas where there is underlying municipal refuse, a readily-visible and permeable subsurface demarcation layer delineating the interface between the refuse and clean soil cover will be installed;

(k) Sediment removal areas within the Creek will be restored with at least one foot of substrate similar to the existing sediments for cover material over disturbed areas;

(l) Institutional controls in the form of an environmental easement/restrictive covenant will be filed in the property records of Onondaga County that will, at a minimum, restrict the use of the affected properties within the Operable Unit to commercial and industrial uses, restrict intrusive activities in areas where residual contamination remains unless the activities are in accordance with an EPA-approved Site Management Plan ("SMP");

(m) Development of an SMP that will provide for the proper management of post-construction activities that may impact completed remedy components (*e.g.*, to address how excavated soils will be managed in the event of future maintenance/repair activities of the pipelines or other infrastructures);

(n) Performance of a detailed hydrologic analysis to determine the effect of the remedy on stream flow, flooding and dynamics and to identify the appropriate materials and bathymetry for restoration and long-term sustainability;

(o) Performance of a Phase IA Cultural Resources Survey to document the Operable Unit's historic resources. Performance of a Phase IB assessment will only be conducted if determined to be necessary based on the Phase IA assessment results; and

(p) Capping of contaminated soil and sediment areas which, during the RD, are determined to be areas that cannot be safely or effectively excavated.

1.4 In accordance the ROD, the remedy for the Lower Ley Creek project will be implemented after the remedy is implemented for the Upper Ley Creek project (i.e., Operable Unit 2 of the General Motors – Inland Fisher Guide Operable Unit of the Onondaga Lake Superfund Site). EPA will coordinate the implementation of the Lower Ley Creek remedy with the remedy for the Upper Ley Creek project.

1.5 The terms used in this SOW that are defined in the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §9601 et seq. ("CERCLA"), in regulations promulgated under CERCLA, or in the AOC, have the meanings assigned to them in CERCLA, in such regulations, or in the AOC, except that the term "Paragraph" or "¶" means a paragraph of the SOW, unless otherwise stated.

2. COMMUNITY INVOLVEMENT

2.1 Community Involvement Responsibilities

(a) The EPA has the lead responsibility for developing and implementing community involvement activities at the Operable Unit. In January 1996, the New York State Department of Environmental Conservation ("DEC") developed a Community Involvement Plan ("CIP") for the Onondaga Lake Superfund Site. Pursuant to 40 C.F.R. § 300.435(c), the EPA shall review the existing CIP and determine whether it should be revised to describe further public involvement activities during the Work that are not already addressed or provided for in the existing CIP. The EPA shall provide Respondents with an opportunity to review and comment on any proposed changes to the CIP before the document is finalized.

(b) If requested by the EPA, Respondents shall provide reasonable support in connection with the EPA's community involvement activities. This may include developing relevant figures or other graphics, preparing fact sheets, providing online access to project deliverables, and providing other supporting project information. The EPA may describe in its CIP Respondents' responsibilities for community involvement activities. All community involvement activities conducted by Respondents at the EPA's request are subject to EPA oversight.

(c) **Respondents' Community Involvement Coordinator**. If requested by the EPA, Respondents shall, within thirty (30) days, designate and notify the EPA of Respondents' Community Involvement Coordinator ("Respondents' CI Coordinator"). Respondents may hire a contractor for this purpose. Respondents' notice to the EPA must include the name, title and qualifications of the Respondents' CI Coordinator. Respondents' CI Coordinator is responsible for providing support regarding the EPA's community involvement activities, including coordinating with the EPA's CI Coordinator regarding responses to the public's inquiries about the Operable Unit.

3. PRE-DESIGN AND REMEDIAL DESIGN

3.1 Pre-Design Investigation. The main purpose of the Pre-Design Investigation ("PDI") is to address any data gaps by conducting additional field investigations.

(a) **Pre-Design Investigation Work Plan**. Respondents shall submit a PDI Work Plan **("PDIWP**") within either (i) 30 days after the effective date of the AOC or (ii) 30 days after resolution of outstanding data interpretation questions posed to EPA by the PRP Group (i.e., the matrix of questions) prior to the date of this agreement, whichever comes later. The PDIWP must include:

- An evaluation and summary of existing data and description of data gaps;
- A sampling plan including media to be sampled, contaminants (PCBs can serve as the indicator compound for other contaminants) or parameters for which sampling will be conducted, location (areal extent and depths), and number of samples;
- A description of the overall strategy for the performance of the investigation activities described in the sampling plan, including the sequencing and/or phasing of surficial sediment sampling or other survey work that may be performed after remediation activities at Upper Ley Creek are completed;
- Cross references to quality assurance/quality control ("QA/QC") requirements set forth in the Quality Assurance Project Plan ("QAPP") as described in ¶ 5.7(d);
- Sample collection for the evaluation of slope stability in deep excavation areas;
- Sample collection for the evaluation of the extent and types of backfill required;
- Description of topographic and bathymetric survey needs to support hydraulic modeling, utility setbacks, and other design components;
- Description of wetland and habitat surveys to be conducted;

- If a treatability study is to be performed to support the RD, description of samples to be collected to support the treatability study.

(b) **PDI Data Evaluation Report.** Following the PDI, Respondents shall submit a PDI Data Evaluation Report. This report must include:

- Summary of the investigations performed;
- Summary of investigation results;
- Summary of validated data (*i.e.,* tables and graphics);
- Data validation reports and laboratory data reports;
- Narrative interpretation of data and results;
- Results of statistical analyses;
- Revised target areas, depths, and volume estimates for the soil and sediment excavations developed using 1 mg/kg PCB for sediment and in the upper two feet of soils and 10 mg/kg PCB for soils below two feet;
- Photographs documenting the work conducted; and
- Conclusions and recommendations for RD, including design parameters and criteria.

(c) The EPA may require Respondents to supplement the PDI Data Evaluation Report and/or to perform additional pre-design studies if warranted based on the findings of the PDI Data Evaluation Report or if otherwise needed for the RD.

3.2 Pre-Design Investigation Field Work

(a) The EPA shall conduct periodic inspections during the PDI. At the EPA's request, the Supervising Contractor or other designee shall accompany the EPA during inspections.

(b) Respondents shall provide certain personal protective equipment ("PPE") needed in accordance with the Health and Safety Plan ("HASP") for EPA personnel and any oversight officials to perform their oversight duties. PPE provided by Respondents will be limited to safety glasses, nitrile gloves, latex/PVC overboots, hearing protection, Tyvek® suits, and high-visibility vests. EPA employees or EPA's contractors will be responsible for providing their own steel-toed work boots, rubber boots, waders, hard hats, personal floatation devices ("PFDs"), long-sleeved shirts, seasonally-appropriate clothing, and any other safety equipment required by the HASP.

3.3 Remedial Design Work Plan ("RDWP"). The RDWP must include:

(a) Plans for implementing all RD activities identified in this SOW, in the RDWP, or required by the EPA to be conducted to develop the RD;

(b) A description of the overall management strategy for performing the RD, including a proposal for phasing of design and construction, if applicable;

(c) A description of how the RD for Lower Ley Creek will be sequenced with the Upper Ley Creek project (*i.e.*, Operable Unit 2 of the General Motors – Inland Fisher Guide Operable Unit of the Onondaga Lake Superfund Site);

(d) A description of the proposed general approach to contracting, construction and operation and maintenance ("O&M") of the remedial action ("RA") as necessary to implement the Work;

(e) A description of the responsibility and authority of all organizations and key personnel involved with the development of the RD;

(f) Descriptions of aspects of the remedy implementation requirements requiring refinement based on PDI data, or requiring clarification based on administrative or physical requirements;

(g) If local disposal is determined to be viable, a description of the steps necessary for consolidating, solidifying, if necessary, and dewatering of the waste material at the local disposal location and process water treatment requirements;

(h) Description of the hydrologic study to be performed;

(i) Descriptions of any applicable permitting requirements and other regulatory requirements for the RA and local disposal, if chosen;

(j) Description of plans for establishing setbacks from pipelines, overhead transmission lines, other underground utilities and bridge abutments;

(k) Description of plans for addressing geotechnical stability in the design approach for areas identified for deep excavation;

(l) Description of plans for obtaining access in connection with the Work, such as property acquisition, property leases, and/or easements; and

(m) All supporting deliverables required to accompany the RDWP as specified in the RD Schedule set forth in ¶ 6.2 (RD Schedule).

(n) Proposed revisions, if any, to the RD Schedule.

(o) A description of information to be reviewed to determine whether or not additional sampling or resurvey of Lower Ley Creek sediments is warranted in order to complete the final design following completion of Upper Ley Creek remediation activities.

3.4 **Local Disposal Assessment and Agreement.** The purpose of the assessment is to evaluate and select a local disposal option (*i.e.,* consolidation under the cap of the Town of Salina Landfill within the area controlled by the leachate collection system or in a newly constructed cell with a liner and leachate collection system on the recently capped Cooper Crouse-Hinds North Landfill).

(a) Respondents shall submit a Local Disposal Assessment Report to the EPA for approval within one hundred twenty (120) days of the effective date of the AOC.

(b) Respondents shall submit an executed agreement with the owner(s) and/or operator(s) of the chosen local disposal facility(ies) which states that the to-be excavated waste will be accepted and that necessary landfill design, closure and O&M will be performed. The Local Disposal Agreement(s) shall be submitted to the EPA within sixty (60) days after EPA concurrence with the Local Disposal Assessment Report.

3.5 Respondents shall meet regularly with the EPA to discuss design issues, as necessary, as directed or determined by the EPA.

(a) **Emergency Response and Reporting**. If any event occurs as a result of the performance of the PDI field work that causes or threatens to cause a release of Waste Material on, at, or from the Operable Unit and that either constitutes an emergency situation or that may present an immediate threat to public health or welfare or the environment, Respondents shall: (1) immediately take all appropriate action to prevent, abate or minimize such release or threat of release; (2) immediately notify the authorized the EPA officer (as specified in ¶ 3.5(c)) orally; and (3) take such actions in consultation with the authorized EPA officer and in accordance with all applicable provisions of the Health and Safety Plan, the Emergency Response Plan as described in ¶ 5.7(b) and any other deliverable approved by the EPA under the SOW.

(b) **Release Reporting**. Upon the occurrence of any event during performance of the Work that Respondents are required to report pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-Know Act ("EPCRA"), 42 U.S.C. § 11004, Respondents shall immediately notify the authorized EPA officer orally.

(c) The "authorized EPA officer" for purposes of immediate oral notifications and consultations under ¶ 3.5(a) and ¶ 3.5(b) is the EPA Project Coordinator, the EPA Alternate Project Coordinator (if the EPA Project Coordinator is unavailable), or the EPA Emergency Response Unit, Region 2 (if both the EPA Project Coordinator and the EPA Alternate Project Coordinator are unavailable).

(d) For any event covered by ¶ 3.5(a) and ¶ 3.5(b), Respondents shall: (1) within fourteen (14) days after the onset of such event, submit a report to the EPA describing the actions or events that occurred and the measures taken, and to be taken, in response thereto; and (2) within thirty (30) days after the conclusion of

such event, submit a report to the EPA describing all actions taken in response to such event.

(e) The reporting requirements under ¶ 3.5 are in addition to the reporting required by CERCLA § 103 or EPCRA § 304.

3.6 Off-Site Shipments

(a) Respondents may ship hazardous substances, pollutants, and contaminants from the Operable Unit to an off-site facility only if they comply with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondents will be deemed to be in compliance with CERCLA § 121(d)(3) and 40 C.F.R. § 300.440 regarding a shipment if Respondents obtain a prior determination from the EPA that the proposed receiving facility for such shipment is acceptable under the criteria of 40 C.F.R. § 300.440(b). Respondents may ship investigation derived waste ("IDW") from the Operable Unit to an off-site facility only if they comply with the EPA's *Guide to Management of Investigation Derived Waste*, OSWER 9345.3-03FS (Jan. 1992).

(b) Respondents may ship Waste Material from the Operable Unit to an out-of-state waste management facility only if, prior to any shipment, they provide notice to the appropriate state environmental official in the receiving facility's state and to the EPA Project Coordinator. This notice requirement will not apply to any off-site shipments when the total quantity of all such shipments does not exceed 10 cubic yards. The notice must include the following information, if available: (1) the name and location of the receiving facility; (2) the type and quantity of Waste Material to be shipped; (3) the schedule for the shipment, and (4) the method of transportation. Respondents also shall notify the state environmental official referenced above and the EPA Project Coordinator of any major changes in the shipment plan, such as a decision to ship the Waste Material to a different out-of-state facility.

3.7 Preliminary (30%) Remedial Design. Respondents shall submit a Preliminary (30%) RD for the EPA's comment in conformance with the schedule in ¶ 6.2. The Preliminary RD must include:

(a) A design criteria report, as described in the *Remedial Design/Remedial Action Handbook*, EPA 540/R-95/059 (June 1995);

(b) Preliminary drawings and a list of specifications to be prepared;

(c) Descriptions of substantive permit requirements, if applicable;

(d) Preliminary Habitat Restoration Plan;

(e) Preliminary Transportation and Non-Local Disposal Plan ("TDP");

(f) A description of how the RA may be implemented in a manner that minimizes environmental impacts in accordance with the EPA's *Principles for Greener Cleanups* (Aug. 2009);

(g) A description of monitoring and control measures to protect human health and the environment, such as air monitoring and dust suppression, during the RA;

3.8 Intermediate (60%) Remedial Design. Respondents shall submit the Intermediate (60%) RD for the EPA's comment in conformance with the schedule in ¶ 6.2. The Intermediate RD must be a continuation and expansion of the previous design submittal and must address the EPA's comments regarding the Preliminary RD. The Intermediate RD must include:

(a) A draft set of construction drawings and specifications;

(b) Intermediate versions of the same elements and deliverables as are required for the Preliminary RD;

(c) A specification for photographic documentation of the RA; and

(d) Supporting deliverables as specified in the RD Schedule.

3.9 Pre-Final (95%) Remedial Design. Respondents shall submit the Pre-Final (95%) RD for the EPA's comment in conformance with the schedule in ¶ 6.2. The Pre-Final RD must be a continuation and expansion of the previous design submittal and must address the EPA's comments regarding the Intermediate RD. The Pre-Final RD must include:

(a) A complete set of construction drawings and specifications for implementation of the Remedial Action;

(b) Survey and engineering drawings showing existing Operable Unit features, such as elements, property borders, and easements;

(c) Pre-Final versions of the same elements and deliverables as are required for the Preliminary RD and Intermediate RD; and

(d) A specification for photographic documentation of the RA; and

(e) Supporting deliverables as specified in the RD Schedule.

3.10 Final (100%) Remedial Design. Respondents shall submit the Final (100%) RD for EPA approval. The Final RD must address the EPA's comments on the Pre-Final RD. In addition, the Final RD will, with EPA approval, incorporate new data/information from Lower Ley Creek, if any, following the completion of remediation activities in Upper Ley Creek. The Final RD must include:

(a) Final versions of the TDP and Habitat Restoration Plan;

(b) Final construction drawings and specifications, suitable for procurement, signed and sealed by a registered Professional Engineer in New York State; and

(c) Draft versions of the SMP, Institutional Controls Implementation and Assurance Plan ("ICIAP") and Periodic Review Support Plan ("PRSP") (which will be finalized for USEPA final approval during remedial action phase of the project).

4. REPORTING

4.1 Progress Reports. Commencing with the month following lodging of the AOC and until the EPA approves the RD Completion, Respondents shall submit progress reports to the EPA on a monthly basis, or as otherwise requested by the EPA. The progress reports shall be submitted to EPA by the 15th day of each month. The reports must cover all activities that took place during the prior reporting period, including:

(a) The actions that have been taken toward achieving compliance with the AOC;

(b) A summary of all validated results of sampling, tests, and all other data received or generated by Respondents that became available in the prior reporting period;

(c) A description of all deliverables that Respondents submitted to the EPA;

(d) A description of any modifications to the work plans or other schedules that Respondents have proposed or that have been approved by the EPA; and

(e) A description of activities anticipated over the next six weeks.

(f) A description of all activities undertaken in support of the CIP during the reporting period and those to be undertaken in the next six weeks.

4.2 Notice of Progress Report Schedule Changes. If the schedule for any activity described in the Progress Reports, including activities required to be described under ¶ 4.1(d), changes, Respondents shall notify the EPA of such change at least three (3) days before performance of the activity.

5. DELIVERABLES

5.1 Applicability. Respondents shall submit deliverables for the EPA's approval or for the EPA's comment as specified in the SOW. If neither is specified, the deliverable does not require the EPA's approval or comment. Paragraphs 5.2 (In Writing) through 5.4 (Technical Specifications) apply to all deliverables. Paragraph 5.5 (Certification) applies to any deliverable that is required to be certified. Paragraph 5.6 (Approval of Deliverables) applies to any deliverable that is required to be submitted for the EPA approval.

5.2 In Writing. As provided in [**¶ 104**] of the AOC, all deliverables under this SOW must be in writing unless otherwise specified.

5.3 All deliverables must be submitted by the deadlines in the RD Schedule in ¶ 6.2 or as otherwise approved by EPA as described in ¶ 6.1, as applicable. Respondents shall submit all deliverables to the EPA in electronic form. If any deliverable includes maps, drawings, or other exhibits that are larger than 8.5" by 11", hard copy submittals (11" by 17") by Respondents ~~is not~~ are required. The EPA reserves the right to request hard copies of all submittals.

5.4 Technical Specifications

(a) Sampling and monitoring data should be submitted in standard regional Electronic Data Deliverable ("EDD") format. Other delivery methods may be allowed if electronic direct submission presents a significant burden or as technology changes.

(b) Spatial data, including spatially-referenced data and geospatial data, should be submitted: (1) in the ESRI File Geodatabase format; and (2) as unprojected geographic coordinates in decimal degree format using North American Datum 1983 ("NAD83") or World Geodetic System 1984 ("WGS84") as the datum. If applicable, submissions should include the collection method(s). Projected coordinates may optionally be included but must be documented. Spatial data should be accompanied by metadata, and such metadata should be compliant with the Federal Geographic Data Committee ("FGDC") Content Standard for Digital Geospatial Metadata and its EPA profile, EPA Geospatial Metadata Technical Specification. An add-on metadata editor for ESRI software, the EPA Metadata Editor ("EME"), complies with these FGDC and the EPA metadata requirements and is available at https://edg.epa.gov/EME/.

(c) Each file must include an attribute name for each unit or sub-unit submitted. Consult http://www.epa.gov/geospatial/policies.html for any further available guidance on attribute identification and naming.

(d) Spatial data submitted by Respondents does not, and is not intended to, define the boundaries of the Operable Unit.

5.5 Certification. The final design must be stamped by a New York State Professional Engineer, and must contain the following statement:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

5.6 Approval of Deliverables

(a) Initial Submissions

- After review of any deliverable that is required to be submitted for the EPA approval under the AOC or the SOW, the EPA shall: (i) approve, in whole or in part, the submission; (ii) approve the submission upon specified conditions; (iii) disapprove, in whole or in part, the submission; or (iv) any combination of the foregoing.

- The EPA also may modify the initial submission to cure deficiencies in the submission if: (i) the EPA determines that disapproving the submission and awaiting a resubmission would cause substantial disruption to the Work; or (ii) previous submission(s) have been disapproved due to material defects and the deficiencies in the initial submission under consideration indicate a bad faith lack of effort to submit an acceptable deliverable.

- The EPA shall endeavor to provide Respondents with notice of approval or disapproval of deliverables within sixty (60) days following submittal by Respondents.

(b) **Resubmissions**. Upon receipt of a notice of disapproval under ¶ 5.6(a) ("Initial Submissions"), or if required by a notice of approval upon specified conditions under ¶ 5.6(a), Respondents shall, within forty-five (45) days or such longer time as specified by the EPA in such notice, correct the deficiencies and resubmit the deliverable for approval. After review of the resubmitted deliverable, the EPA may: (1) approve, in whole or in part, the resubmission; (2) approve the resubmission upon specified conditions; (3) modify the resubmission; (4) disapprove, in whole or in part, the resubmission, requiring Respondents to correct the deficiencies; or (5) any combination of the foregoing.

(c) **Implementation**. Upon approval, approval upon specified conditions, or modification by the EPA under ¶ 5.6(a) (Initial Submissions) or ¶ 5.6(b) (Resubmissions), of any deliverable, or any portion thereof: (1) such deliverable, or portion thereof, will be incorporated into and enforceable under the AOC; and (2) Respondents shall take any action required by such deliverable, or portion thereof. The implementation of any non-deficient portion of a deliverable submitted or resubmitted under ¶ 5.6(a) or ¶ 5.6(b) does not relieve Respondents of any liability for stipulated penalties under Section **XVIII** (Stipulated Penalties) of the AOC.

5.7 Supporting Deliverables. Respondents shall submit each of the following supporting deliverables for EPA approval, except as specifically provided. The deliverables must be submitted, for the first time, by the deadlines in the RD Schedule in ¶ 6.2, or any other EPA-approved schedule as described in ¶ 6.1, as applicable. Respondents shall develop the deliverables in accordance with all applicable regulations, guidance, and policies (see Section 8 (References)). Respondents shall update each of these supporting deliverables as necessary or appropriate during the course of the Work, and/or as required under ¶ 5.6(b).

(a) **Health and Safety Plan**. The HASP describes all activities to be performed to protect onsite personnel and area residents from physical, chemical, and all other hazards posed by the Work. Respondents shall develop the HASP in accordance with the EPA's Emergency Responder Health and Safety and Occupational Safety and Health Administration requirements under 29 C.F.R. §§ 1910 and 1926. The HASP should cover the PDI and RD field activities. The EPA does not approve the HASP, but will review it to ensure that all necessary elements are included and that the plan provides for the protection of human health and the environment.

(b) **Emergency Response Plan**. The Emergency Response Plan ("ERP") must describe procedures to be used in the event of an accident or emergency at the Operable Unit during the PDI and RD field activities. The ERP must include:

- Name of the person or entity responsible for responding in the event of an emergency incident;

- Spill Prevention, Control, and Countermeasures ("SPCC") Plan ("if applicable"), consistent with the regulations under 40 C.F.R. Part 112, describing measures to prevent, and contingency plans for, spills and discharges;

- Notification activities in accordance with ¶ 3.5(b) (Release Reporting) in the event of a release of hazardous substances requiring reporting under Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of EPCRA, 42 U.S.C. § 11004; and

- A description of actions necessary to comply with Paragraph 38 (Emergencies and Releases) of the AOC in the event of an occurrence during the performance of the Work that causes or threatens a release of Waste Material from the Operable Unit that constitutes an emergency or may present an immediate threat to public health or welfare or the environment.

(c) **Field Sampling Plan**. The Field Sampling Plan ("FSP") supplements the QAPP and will be an appendix to the PDI Work Plan. The FSP addresses all sample collection activities to be implemented for the PDI. The FSP must be written so that a field sampling team unfamiliar with the project would be able to gather the samples and field information required. Respondents shall develop the FSP in accordance with *Guidance for Conducting Remedial Investigations and Feasibility Studies*, EPA/540/G 89/004 (Oct. 1988).

(d) **Quality Assurance Project Plan**. The QAPP addresses sample analysis and data handling regarding the Work and will be an appendix to the PDI Work Plan. The QAPP must include a detailed explanation of Respondents' quality assurance, quality control, and chain of custody procedures for all treatability, design, compliance, and monitoring samples. Respondents shall develop the QAPP in accordance with *EPA Requirements for Quality Assurance Project Plans*, QA/R-

5, EPA/240/B-01/003 (Mar. 2001, reissued May 2006); *Guidance for Quality Assurance Project Plans*., QA/G-5, EPA/240/R 02/009 (Dec. 2002); and *Uniform Federal Policy for Quality Assurance Project Plans*, Parts 1-3, EPA/505/B-04/900A though 900C (Mar. 2005). The QAPP also must include procedures:

- To ensure that the EPA and the State and their authorized representatives have reasonable access to laboratories used by Respondents in implementing the AOC (Respondents' Labs);

- To ensure that Respondents' Labs analyze all samples submitted pursuant to the QAPP for quality assurance monitoring;

- To ensure that Respondents' Labs perform all analyses using the EPA-accepted methods (*i.e*., the methods documented in *USEPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods*, ISM2.2 [August 2014] and *USEPA Contract Laboratory Program Statement of Work for Organic Superfund Methods*, SOM02.2 [August 2014] or other equivalent methods acceptable to the EPA [i.e., SW-846 Methods 8082, 6010C, or 6020]);

- To ensure that Respondents' Labs participate in an EPA-accepted QA/QC program or other program QA/QC acceptable to the EPA;

- For Respondents to provide the EPA and the State with notice at least fourteen (14) days prior to any sample collection activity;

- For Respondents to provide split samples and/or field duplicate samples to the EPA and the State upon request;

- For Respondents to submit to the EPA and the State all validated sampling and tests results and other data in connection with the implementation of the AOC; and

- The laboratories to be used will be specified in the QAPP. All laboratories will be certified for the analytical service to be provided by one of the following accreditation/certification programs: USEPA Contract Laboratory Program ("CLP"), National Environmental Laboratory Accreditation Program ("NELAP"), or a certification issued by a program conducted or approved by a state, and acceptable to EPA.

(e) **Baseline Monitoring Plan**. The purpose of the Baseline Monitoring Plan ("BMP") is to obtain baseline information regarding the extent of contamination in affected media at the Operable Unit; to obtain information, for comparison to short- and long- term monitoring to be conducted during and after implementation of the RA. The baseline data will provide a basis for comparison in order to evaluate the movement of and changes in contamination throughout the Operable Unit, during implementation; whether performance standards are achieved

following the RA; and to determine whether additional actions are needed, including further Operable Unit monitoring. The BMP must include:

- Description of the environmental media to be monitored;
- Description of the data collection parameters, including existing and proposed monitoring devices and locations, schedule and frequency of monitoring, analytical parameters to be monitored, and analytical methods employed;
- Description of verification sampling procedures;
- Description of deliverables that will be generated in connection with monitoring, including sampling schedules, laboratory records, monitoring reports, and schedule for reporting to the EPA and State agencies; and
- Description of proposed additional monitoring and data collection actions (such as increases in frequency of monitoring, and/or installation of additional monitoring devices in the affected areas) in the event that results from monitoring devices indicate unexpected conditions (such as higher than expected concentrations of the contaminants of concern).

(f) **Habitat Restoration Plan.** The Habitat Restoration Plan must include:

- Description of delineated wetlands and habitats for affected areas of the Operable Unit;
- Description of habitat activities to be undertaken after the implementation of soil and sediment excavation activities, including descriptions and specifications of the types and extents of backfill material to be placed and the types and locations of any seeding and plantings. Habitat construction in soil excavation areas and excavated wetland areas will be performed to restore areas to match pre-excavation conditions, to the extent practicable, based on a habitat survey to be performed as part of the PDI, but otherwise not interfere with the works of the regulating drainage district; and
- Description of requirements for monitoring the restored habitats after completion of the remedial construction activities.

(g) **Site Management Plan (SMP).** The SMP must include:

- A summary of previous investigations and remedial actions at the Operable Unit, including supporting tables and figures;
- A description of any institutional and engineering controls for the Operable Unit, including supporting tables and figures;

- Procedures to confirm that the engineering controls and institutional controls are in place and effective; and

- Provisions for the management of future excavations in Operable Unit areas after the remedial construction work is completed (*e.g.,* to address how excavated soils will be managed in the event of future maintenance/repair activities of the pipelines and in areas where municipal refuse was disposed).

(h) **Transportation and Non-Local Disposal Plan (TDP)**. The TDP describes plans for the transportation and disposal of Waste Material to be generated during the remedial action. The TDP must include:

- Proposed routes for off-site shipment of Waste Material;

- Identification of communities affected by shipment of Waste Material; and

- Description of plans to minimize impacts on affected communities.

(i) **Institutional Controls Implementation and Assurance Plan.** The ICIAP describes plans to implement, maintain, and enforce the Institutional Controls ("ICs") at the Operable Unit. Respondents shall develop the ICIAP in accordance with *Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites*, OSWER 9355.0-89, EPA/540/R-09/001 (Dec. 2012), and *Institutional Controls: A Guide to Preparing Institutional Controls Implementation and Assurance Plans at Contaminated Sites*, OSWER 9200.0-77, EPA/540/R-09/02 (Dec. 2012).

(j) **Periodic Review Support Plan ("PRSP")**. The PRSP addresses the studies and investigations that Respondents shall conduct to support the EPA's reviews of whether the RA is protective of human health and the environment in accordance with Section 121(c) of CERCLA, 42 U.S.C. § 9621(c) (also known as "Five-year Reviews"). Respondents shall develop the plan in accordance with *Comprehensive Five-year Review Guidance*, OSWER 9355.7-03B-P (June 2001), and any other relevant five-year review guidance.

6. SCHEDULES

6.1 Applicability and Revisions. All deliverables and tasks required under this SOW must be submitted or completed by the deadlines or within the time durations listed in the RD Schedule set forth below. Respondents may submit proposed revised RD Schedules for the EPA approval. Upon the EPA's written approval, the revised RD Schedule supersede the RD Schedule set forth below, and any previously-approved RD Schedule.

6.2 RD Schedule

	Description of Deliverable, Task	Included Supporting Deliverable	¶ Ref.	Deadline
1	PDIWP		3.1(a)	Either (i) 30 days after the effective date of the AOC or (ii) 30 days after resolution of the matrix of questions, whichever comes later
2	PDIWP Supporting Plans	HASP, QAPP, ERP	5.7	Either (i) 30 days after the effective date of the AOC or (ii) 30 days after resolution of the matrix of questions, whichever comes later
3	PDI Data Evaluation Report		3.1(b)	90 days after completing PDI field work
4	Local Disposal Assessment Report		3.4	120 days after the effective date of the AOC
5	Local Disposal Agreement		3.4	60 days after EPA concurrence with the Local Disposal Assessment Report
6	RDWP	BMP	3.3	60 days after EPA concurrence with the Local Disposal Assessment
7	Preliminary (30%) RD	TDP and Habitat Restoration Plan	3.7	90 days after the later of: • EPA approval of the RDWP; or • Submittal of the PDI Evaluation Report
8	Intermediate (60%) RD	Same as above	3.8	60 days after EPA comments on the Preliminary RD
9	Pre-final (95%) RD	Same as above, plus draft SMP, ICIAP, and PRSP	3.9	60 days after EPA comments on the Intermediate RD
10	Final (100%) RD	Same as above, including draft versions of the SMP, ICIAP, and PRSP	3.10	60 days after EPA comments on Pre-final RD[1]

[1] The Final Design Report may be submitted on an alternative schedule after Upper Ley Creek sediment remediation work is completed, and after PRP Group review and determination of whether any additional

7. STATE AND ONONDAGA NATION PARTICIPATION

7.1 **Copies**. Respondents shall, at any time they send a deliverable to the EPA for review, send a copy of such deliverable to the State and to the Onondaga Nation for their review. Maps and drawings larger than 8.5" by 11" should be submitted at the maximum size of 11" by 17". Hard copies of documents shall be delivered, if requested. The EPA shall, at any time it sends a notice, authorization, approval, disapproval, or certification to Respondents, send a copy of such document to the State and the Onondaga Nation. Respondents will send electronic copies of finalized documents to the administrative repository at the Town of Salina library for public viewing.

7.2 **Review and Comment**. The State and Onondaga Nation will have a reasonable opportunity for review and comment prior to any EPA approval or disapproval under ¶ 5.6 (Approval of Deliverables) of any deliverables that are required to be submitted for EPA approval. The EPA shall be responsible for coordinating reviews by the State and Onondaga Nation. The State and Onondaga Nation will provide any comments on the deliverables directly to the EPA for review prior to EPA approval or disapproval of the deliverables. The EPA shall forward to Respondents any applicable comments from the State and Onondaga Nation along with EPA's comments.

8. REFERENCES

8.1 The following regulations and guidance documents, among others, apply to the Work. Any item for which a specific URL is not provided below is available on one of the two the EPA Web pages listed in ¶ 8.2:

(a) A Compendium of Superfund Field Operations Methods, OSWER 9355.0-14, EPA/540/P-87/001a (Aug. 1987).

(b) CERCLA Compliance with Other Laws Manual, Part I: Interim Final, OSWER 9234.1-01, EPA/540/G-89/006 (Aug. 1988).

(c) Guidance for Conducting Remedial Investigations and Feasibility Studies, OSWER 9355.3-01, EPA/540/G-89/004 (Oct. 1988).

(d) CERCLA Compliance with Other Laws Manual, Part II, OSWER 9234.1-02, EPA/540/G-89/009 (Aug. 1989).

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sampling or resurvey of the Lower Ley Creek sediment remediation area is warranted. The PRP Group will review the flow history since completion of the PDI field sampling and available information pertinent to potential effects of the Upper Ley Creek remediation work on the Lower Ley Creek remediation areas and notify EPA whether or not the Group believes additional sediment sampling or survey in Lower Ley Creek is warranted prior to completing the Final RD.

(e) Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties, OSWER 9355.5-01, EPA/540/G-90/001 (Apr.1990).

(f) Guidance on Expediting Remedial Design and Remedial Actions, OSWER 9355.5-02, EPA/540/G-90/006 (Aug. 1990).

(g) Guide to Management of Investigation-Derived Wastes, OSWER 9345.3-03FS (Jan. 1992).

(h) Permits and Permit Equivalency Processes for CERCLA On-Site Response Actions, OSWER 9355.7-03 (Feb. 1992).

(i) Guidance for Conducting Treatability Studies under CERCLA, OSWER 9380.3-10, EPA/540/R-92/071A (Nov. 1992).

(j) National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, 40 C.F.R. Part 300 (Oct. 1994).

(k) Guidance for Scoping the Remedial Design, OSWER 9355.0-43, EPA/540/R-95/025 (Mar. 1995).

(l) Remedial Design/Remedial Action Handbook, OSWER 9355.0-04B, EPA/540/R-95/059 (June 1995).

(m) EPA Guidance for Data Quality Assessment, Practical Methods for Data Analysis, QA/G-9, EPA/600/R-96/084 (July 2000).

(n) Operation and Maintenance in the Superfund Program, OSWER 9200.1-37FS, EPA/540/F-01/004 (May 2001).

(o) Comprehensive Five-year Review Guidance, OSWER 9355.7-03B-P, 540-R-01-007 (June 2001).

(p) Guidance for Quality Assurance Project Plans, QA/G-5, EPA/240/R-02/009 (Dec. 2002).

(q) Institutional Controls: Third Party Beneficiary Rights in Proprietary Controls (Apr. 2004).

(r) Quality Systems for Environmental Data and Technology Programs -- Requirements with Guidance for Use, ANSI/ASQ E4-2004 (2004).

(s) Uniform Federal Policy for Quality Assurance Project Plans, Parts 1-3, EPA/505/B-04/900A though 900C (Mar. 2005).

(t) Superfund Community Involvement Handbook, EPA/540/K-05/003 (Apr. 2005).

(u) EPA Guidance on Systematic Planning Using the Data Quality Objectives Process, QA/G-4, EPA/240/B-06/001 (Feb. 2006).

(v) EPA Requirements for Quality Assurance Project Plans, QA/R-5, EPA/240/B-01/003 (Mar. 2001, reissued May 2006).

(w) EPA Requirements for Quality Management Plans, QA/R-2, EPA/240/B-01/002 (Mar. 2001, reissued May 2006).

(x) USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, ISM (August 2014).

(y) USEPA Contract Laboratory Program Statement of Work for Organic Analysis, SOM02.2 (amended August 2014).

(z) EPA National Geospatial Data Policy, CIO Policy Transmittal 05-002 (Aug. 2008), available at http://www.epa.gov/geospatial/policies.html and http://www.epa.gov/geospatial/docs/National_Geospatial_Data_Policy.pdf.

(aa) Summary of Key Existing EPA CERCLA Policies for Groundwater Restoration, OSWER 9283.1-33 (June 2009).

(bb) Principles for Greener Cleanups (Aug. 2009), available at http://www.epa.gov/oswer/greenercleanups/.

(cc) USEPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods (Multi-Media, Multi-Concentration), ISM01.2 (Jan. 2010).

(dd) Close Out Procedures for National Priorities List Sites, OSWER 9320.2-22 (May 2011).

(ee) Groundwater Road Map: Recommended Process for Restoring Contaminated Groundwater at Superfund Sites, OSWER 9283.1-34 (July 2011).

(ff) Recommended Evaluation of Institutional Controls: Supplement to the "Comprehensive Five-Year Review Guidance," OSWER 9355.7-18 ("Sep. 2011").

(gg) Construction Specifications Institute's MasterFormat 2012, available from the Construction Specifications Institute, www.csinet.org/masterformat.

(hh) Updated Superfund Response and Settlement Approach for Sites Using the Superfund Alternative Approach , OSWER 9200.2-125 (Sep. 2012)

(ii) Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites, OSWER 9355.0-89, EPA/540/R-09/001 (Dec. 2012).

(jj) Institutional Controls: A Guide to Preparing Institutional Controls Implementation and Assurance Plans at Contaminated Sites, OSWER 9200.0-77, EPA/540/R-09/02 (Dec. 2012).

(kk) EPA's Emergency Responder Health and Safety Manual, OSWER 9285.3-12 (July 2005 and updates), http://www.epaosc.org/_HealthSafetyManual/manual-index.htm

(ll) Broader Application of Remedial Design and Remedial Action Pilot Project Lessons Learned, OSWER 9200.2-129 ("Feb. 2013").

8.2 A more complete list may be found on the following EPA Web pages:

Laws, Policy, and Guidance http://www.epa.gov/superfund/policy/index.htm

Test Methods Collections http://www.epa.gov/fem/methcollectns.htm

8.3 For any regulation or guidance referenced in the AOC or SOW, the reference will be read to include any subsequent modification, amendment, or replacement of such regulation or guidance. Such modifications, amendments, or replacements apply to the Work only after Respondents receive notification from the EPA of the modification, amendment, or replacement.